Remarks/Arguments

This Amendment is responsive to the Office Action of March 24, 2006.

This Amendment makes a number of changes to the claims. More particularly, the pump is now required to be a "positive-displacement pump". Support for this terminology is found in paragraph [0010] of the specification. Next, the specific pressure ratio of "at least 2.0" has been deleted from claim 1. The further limitation as to "controlling the time during which the temperature of said fluid and contaminants are elevated" has also been deleted from claim 1. Rather, claim1 now specifies that the pump is operated at a pressure ratio sufficient to elevate the pressure and temperature of the fluid and contaminants passing through said pump to alter substantially all of said contaminants passing through said pump". This type of functional language was expressly approved in *In re Swinehart et al.*, 439 F.2d 210, 169 USPQ 226 (CCPA 1971), and is now binding precedent upon the Federal Circuit and the PTO. *See, South Corp. v. United States*, 690 F.2d 1368, 215 USPQ 657 (Fed. Cir. 1982).

Applicants believe that the contaminants in the fluid are killed by the repeated fluctuating pressure and temperature cycles, without such contaminants having to be held at an elevated temperature for a predetermined period of time. However, Applicants' belief and understanding as to the theory by which the improved process operates is immaterial. See, e.g., DeForest Radio Co. v. General Electric Co., 383 U.S. 664, 686, 9 USPQ 297, 304 (1931) ["Whether DeForest know the scientific explanation of it is unimportant, since he did know and use the device and employ the methods which produced the desired results and which are the device and methods of the patent."], and Smith v. Hall, 301 U.S. 216, 226-227, 33 USPQ 249, 254 (1937) ["Whether Hastings know fully and precisely the scientific principles in the procedure thus outlined is immaterial. It is enough if he knew and used the methods with operative success."]. Thus, Applicants are not bound to know or understand the precise theory by which the present invention operates. Rather, it is sufficient that they teach others how to purposefully use the process for the purpose intended.

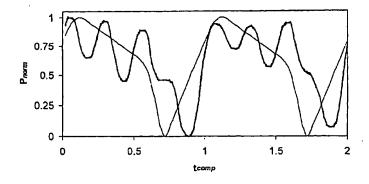
The present invention claims a new use of an old structure. More particularly, the present invention claims the use of a positive-displacement pump to elevate the pressure and temperature of fluid and contaminants passing through the pump to alter substantially all of the contaminants passing through the pump. The preferred embodiment utilizes a Roots-type positive-displacement pump in a manner not intended by the pump manufacturer. Indeed, Applicants purposefully restrict the flow through the pump in such a manner as to deliberately increase the pressure ratio (*i.e.*, the ratio of the outlet pressure to the inlet pressure). This causes heating of the fluid beyond the maximum temperature counseled by the pump manufacturer. For example, a prototype was made of a 45 Series Roots Blower, made by Gardner Denver Blower Division, 100 Gardner Park, Peachtree City, Georgia 30269. According to the instruction manual (copy of pertinent page attached) that accompanied that prototype, the blower should be operated at a maximum discharge temperature of 350 °F, which translates to about 179 °C. In the example discussed below, Applicants purposefully operated their blower at a discharge temperature of about 200 °C, substantially above the maximum

discharge temperature recommended by the blower manufacturer.

Otherwise stated, Applicants have discovered a simple and yet highly-effective way of sterilizing or cleaning contaminated air by passing it through a flow-restricted positive-displacement pump operating beyond the pump manufacturer's recommended maximum temperature. Such a pump has a cycle of operation. During the cycle, the pressure and temperature are cyclically increased as the fluid is compressed. It is thought that the cooperative nature of such compression and temperature elevation contributes materially to the "alteration" of the contaminants. For example, Figs. 4 and 5 are "before" and "after" scanning electron micrographs of a test sample of air contaminated with Bacillus globigii (*Bg*) spores. In the "after" photo shown in Fig. 5, the spores have simply passed through a Roots blower with compressive heating to a temperature of about 200° C.

A comparison of Figs. 4 and 5 will reveal that most of the spores are no longer present in the "after" photo. If the spores had been killed by thermal elevation to about 200° C alone, without more, one would have expected to see a like "body count" of dead spores in Fig. 5, similar to what was seen in Fig. 4. In other words, one would have expected to see a colony of "live" spores in Fig. 4, and a like colony of "dead" spores in Fig. 5. However, a comparison of Figs. 4 and 5, does not reveal a like "body count" of dead spores. In fact, most of the dead spores are simply no longer present. Because of this, Applicants theorize that the cyclical pressure in the operation of the positive-displacement pump contributes materially to a fragmentation of the spores into minute particles, and, by breaking up the thermal mass of the spores, this facilitates and enhances a short-term high-temperature "flash" kill of the spore fragments. In companion measurements, the collection of spores with and without heating the gas corroboratively demonstrated that more than 99.9% of the Bg spores passing through the pump were destroyed.

As indicated above, Applicants are not claiming a positive-displacement pump or a Roots blower *per se* as an apparatus. Rather, Applicants are claiming a <u>method</u> of altering a fluid-borne contaminant which comprises the steps of: providing a positive-displacement pump, connecting the pump inlet to a source of contaminated fluid, and operating the pump at a pressure ratio sufficient to elevate the pressure and temperature of the fluid and contaminants passing through the pump to alter substantially all of the contaminants passing through the pump. The pressure v. temperature characteristics of the prototype pump are shown below:



Page 8 of 16

This represents a new use of an old structure. It is well settled that such a new use of an old structure may only be claimed as a method. For example, in *Ex parte Müller*, 81 USPQ 261 (Bd. App. 1947), the Board of Appeals allowed a claim in a reissue application for the "method of killing insects which comprises dissolving the chemical compound [DDT] . . . in a solvent liquid and spraying the liquid so as to bring [the DDT] . . . into contact with the insects." The patentee was not the first to identify DDT, or to dissolve it in a solvent. His invention lay in the discovery of the compound's effectiveness in killing insects. The method claim was therefore fundamentally for a "new use".

In Ex parte Wagner, 88 USPQ 217 (Bd. App. 1950), the Board of Appeals allowed a process claim for the drilling of wells with a certain drilling mud. The Board agreed that a patent could be obtained for a manipulative process which was otherwise "old", except for the employment of a different material:

"[M]any processes which are old in a procedural sense become new when, by the use of a different agent, a new result is accomplished. In considering the patentability of such processes, it appears that the real criterion is not whether the steps themselves are shown in the prior art but whether the use of the material in the process claimed is suggested by the prior art. It is not considered proper to disregard the specific nature of the material employed in the claim process which is responsible for the unobvious result and determine patentability only if the process solely on the novelty of the physical manipulative steps recited. If the result of the process is unobvious and the particular use is not suggested by the prior art, the process claims should be allowed." (*Id.* at 220)

In Rohm & Haas Co. v. Roberts Chemicals, Inc., 245 F.2d 693, 113 USPQ 423 (4th Cir. 1957), the Court affirmed the validity of claims in a reissue patent directed to "the process of controlling fungus growth on living plants which comprises applying to the plants a fungicidal composition" of a certain description. The composition was old, and the patentee's discovery was its superior quality as a fungicide.

The patentability of a new use of an old process is now preserved in 35 U.S.C. §100(b), which provides:

"(b) The term 'process' means process, art or method, and includes a new use of an old process, machine, manufacture, composition of matter, or material."

In the recent Office Action, the Examiner rejected claims 1, 3, 6-9, 13-15 and 19 under 35 U.S.C. §102(b) as being allegedly "anticipated" by Zukerberg *et al.* (U.S. Pat. No. 3,966,407). The

Examiner then further rejected claim 10 under 35 U.S.C. §103(a) for alleged "obviousness" over Zukerberg et al. in view of Ungar (U.S. Pat. No. 2,691,482). Here, the Examiner said:

"Zukerberg et al. fails to specifically teach a compressor that is a Roots-type positive displacement pump.

Ungar discloses a process for compressing a gas. The gas is passed through a Roots-type positive displacement pump in order to achieve a high compression ratio such as 5 to 1 (See col. 1, lines 1-55). This reference has been relied on to teach a functionally equivalent pump (Roots-type positive displacement pump) for compressing a gas.

Therefore, it would have been obvious to replace compressor (24) with an equivalent viable alternative such as a Roots-type positive displacement pump as taught by Ungar. Furthermore, it would have been obvious to select the known Roots-type positive displacement pump in place of the compressor (24) based on its suitability and desired characteristics."

The Examiner then rejected claim 16 for alleged "obviousness" over Zukerberg et al.; rejected claim 17 for alleged "obviousness" over Zukerberg et al. further in view of Homeyer et al. (U.S. Pat. No. 6,280,691); and rejected claim 18 for alleged "obviousness" over Zukerberg et al. further in view of Lustig (U.S. Pat. No. 3,555,787); rejected claim 20 for alleged "obviousness" over Zukerberg et al. in view of Houde et al. (U.S. Pat. Application Pub. No. 2004/002126 A1); and, finally, rejected claim 21 as either "anticipated" by, or, in the alternative, as being "obvious" over Zukerberg et al.

In this Amendment, applicants have amended independent claims 1 and 21 to specifically recite the inclusion of a "positive-displacement" pump.

Applicants' attorney respectfully submits that the invention defined by independent claims 1 and 21 of the present application are neither taught, nor prospectively suggested, by the fair teaching of any of the references cited by the Examiner.

The principal reference, Zukerberg, discloses an air sterilization loop system which employs a gas turbine 60 to drive an <u>axial compressor</u> 24. Dirty air is circulated through a dehumidifier 50, heat exchanger 52, and filter bank 54, and is then circulated through the axial compressor where it is subjected to a constant elevated pressure and temperature. The reference teaches that the temperature may reach as high as 700° F. The outlet heat from the gas turbine is supplied via line 62 to a regenerator 26, which functions to hold the contaminated gas at an elevated temperature. The heated gas is then permitted to cool through an expansion turbine, and is sent through a post-treatment block 30, which includes a humidifier, heat exchanger, and filter bank, back to the facility. This reference also speaks of the system as serving a medical service facility, at a closed circulation flow of about

20,000 ft³/min. This unusually high flow is manifestly the reason why Zukerberg uses an axial compressor. In fact, Zukerberg does not mention the use of any type of compressor other than an axial flow device. Thus, Zukerberg's device appears to attempt to convert contaminants by increasing the pressure an temperature thereon, and holding such heated air at such elevated temperature "for a period of time sufficient to achieve substantially complete sterilization". (Col. 4, line 26 et seq.)

Zukerberg uses an axial compressor because he is concerned with a high-volume momentum flow of fluid through his system. In Applicants' invention, on the other hand, a positive-displacement pump, such as a Roots blower, is used in an aberrated other-than-as-intended-by-the-pump-manufacturer sense. Rather than simply using the pump to move a large volume of fluid, the Applicants deliberately restrict the flow so as to raise the pressure ratio and to convert substantially all of the various contaminants in the fluid. In other words, in Applicants' use, a positive-displacement pump is used in a sense antithetical to high momentum flow. Applicants use their positive-displacement pump to raise the pressure and temperature of the fluid, not to enhance a high volume flow. Axial flow compressors are fundamentally different from positive-displacement pumps or blowers. In the former, the pressure and temperature of the fluid are increased by increasing the momentum of the fluid. In the latter, the pressure and temperature are increased by decreasing the volume of the fluid passing through the pump. See, e.g., Marks, Standard Handbook for Mechanical Engineers (Mc-Graw-Hill Book Co., New York) (7th Ed.) [at14-44-5].

To be sure, positive-displacement pumps, such as Roots blowers, are individually known. The Ungar reference is only one example.

Independent claims 1 and 20, as now amended, clearly distinguish from the Zukerberg reference by specifically requiring the inclusion of a positive-displacement pump.

Applicants' attorney would also respectfully submit that it would not have been obvious to substitute a positive-displacement pump, such as the Roots blower of Ungar, for the high-volume momentum-flow axial compressor 24 of Zukerberg. Indeed, to use a positive-displacement pump in the manner contemplated by Applicants it would be to substantially impede the high volume flow contemplated by Zukerberg.

Perhaps more importantly, the Examiner has failed to point out any deficiency in the Zukerberg reference that would motivate one skilled in the art to look to a secondary reference, such as Ungar.

This was recently addressed in *In re Leonard R. Kahn*, __ F.3d __, 78 USPQ2d 1329, 1335 (Fed. Cir. 2006), copy enclosed. There, the Court noted that most inventions arise from a combination of old elements, and each element may often be found in the prior art. However, mere identification in the prior art of each element is insufficient to defeat patentability of the combined subject matter as a whole. (*Id.*) The Court continued that the Board must articulate the basis on which it

concludes that it would have been obvious to make the claimed invention:

"In practice, this requires that the Board 'explain the reasons one of ordinary skill in the art would have been motivated to selected the references and to combine them to render the claimed invention obvious." (*Id.*)

The Court then continued:

"When the Board does not explain the motivation, or the suggestion or teaching that would have lead the skilled artist at the time of the invention to the claimed combination as a whole, we infer that the Board used hindsight to conclude the invention was obvious. . . . The 'motivation-suggestion-teaching' requirement protects against the entry of hindsight into the obviousness analysis, a problem which §103 was meant to confront." (*Id.*)

In the case at hand, the Examiner has not pointed to any deficiency in Zukerberg that would motivate a person to look to a secondary reference, such as Ungar. In fact, the Examiner has just conclusorally stated that "it would have been obvious to replace compressor (24) with an equivalent viable alternative", without any supported reasoning or explanation as to why a person skilled in this art would have been motivated to make such substitution. As pointed out above, a positive-displacement pump is not the "equivalent viable alternative" to a momentum-type axial flow compressor. As noted in *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999), broad conclusory statements by an Examiner regarding the teaching of multiple reference, standing alone, do not provide the type of evidence needed to support a conclusion of obviousness:

"The range of sources available, however, does not diminish the requirement for actual evidence. That is, the showing must be clear and particular. See, e.g., C.R. Bard, 157 F.3d at 1352, 48 USPQ2d at 1232. Broad conclusory statements regarding the teaching of multiple references, standing alone, are not 'evidence.' E.g., McElmurry v. Arkansas Power & Light Co., 955 F.2d, 1576, 1578, 27 USPQ2d 1129, 1131 (Fed. Cir. 1993) ('Mere denials and conclusory statements, however, are not sufficient to establish a genuine issue of material fact.'); In re Sichert, 566 F.2d 1154, 1164, 196 USPQ 209, 217 (CCPA 1977) ('The Examiner's conclusory statement that the specification does not teach the best mode of using the invention is unaccompanied by evidence or reasoning and is entirely inadequate to support the rejection.'). In addition to demonstrating the propriety of an obvious analysis, particular factual findings regarding the suggestion, teaching, or motivation to combine serve a number of impor-

> tant purposes, including: (1) clear explication of a position adopted by the Examiner on the Board; (2) identification of the factual disputes, if any, between the applicant and the Board; and (3) facilitation of review on appeal."

Thus, the combination of Zukerberg and Ungar is illusory. There is simply no need or motivation to make the mental substitution that the Examiner has made. The cited references do not identify any deficiency in the prior art. Without recognition of a problem to be solved, the references cannot suggest a solution. An answer follows a question, not the other way around. *Cf., Ecolochem, Inc. v. S. Cal. Edison Co.*, 227 F.3d 1361, 1372, 56 USPQ2d 1065, 1073 (Fed. Cir. 2000) ["Although the suggestion to combine references may flow from the nature of the problem, '[d]efining the problem in terms of its solution reveals improper hindsight in the selection of the prior art relevant to obviousness.""]. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in Applicants' disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Moreover, none of the cited prior art references teaches or suggests the desirability of using a positive-displacement pump to alter contaminants. Since the only mention of this is in Applicants' disclosure, it appears that the Examiner has attempted to <u>reconstruct</u> the prior art <u>improperly</u> with specific knowledge gained from a careful study of Applicants' disclosure.

In Orthopedic Equipment Co. v. United States, 702 F.2d 1005, 1012, 217 USPQ 193, 199 (Fed. Cir. 1983), the Federal Circuit likened such hindsight reconstruction to "Monday morning quarterbacking":

"The question of nonobviousness is a simple one to ask, but difficult to answer. The person of ordinary skill in the art at the time of the patentee's invention, . . . , is presumed to have before him all of the relevant prior art. As has been previously explained, the available art shows each of the elements of the claims in suit. Armed with this information, would it then be nonobvious to this person of ordinary skill in the art to coordinate these elements in the same manner as the claims in suit? The difficulty which attaches to all honest attempts to answer this question can be attributed to the strong temptation to rely on hindsight while undertaking this evaluation. It is wrong to use the patent in suit as a guide through the maze of the prior art references, combining the right references in the right way so as to achieve the result of the claims in suit. Monday morning quarter-backing is quite improper when resolving the question of non-obviousness in a court of law." (Emphasis added)

Amplifying this, the same court said in W.L. Gore & Associates v. Garlock, Inc., 721 F.2d

1540, 1553, 220 USPQ 303, 312-313 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984):

"To imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher."

Here, the statutory command of section 103 charges the Examiner with an impossible task: he must first study Applicants' disclosure to learn the intricacies of the claimed invention, and then forget what he just learned and view the prior art as one would have seen it at the time the invention was made.

"It is difficult but necessary that the decisionmaker forget what he or she has been taught at trial about the claimed invention and cast the mind back to the time the invention was made (often as here many years), to occupy the mind of one skilled in the art who is presented only with the references, and who is normally guided by the then-accepted wisdom in the art." (*Id.*)

In this case, the Examiner has been seduced by the siren's song. He has reconstructed the prior art with specific knowledge gained from a careful study of Applicants' disclosure. However, according to the statutory command, he cannot be Ulysses. Rather, he must forget what he has just learned from a careful study of Applicants' disclosure, and place himself in the position of one of Ulysses' crewmen, who had put wax in his ears to prevent himself from ever hearing the siren's song. Of course, it is humanly impossible to simply forget what one has learned. Such an impossible burden was not even placed on a mythological figure, such as Ulysses.

It appears that the Examiner was guided by Applicants' disclosure, rather than by the prior art itself. The Examiner may not carefully study the disclosure, and then carefully "pick" and "choose" particular parts of prior art, knowing just how they might be combined in just the right way, with the benefit of knowledge gained from a careful study of Applicants' disclosure. Rather, he must view the entire body of prior art from the standpoint of just before the invention was made. In other words, the Examiner must be <u>pushed</u> to a conclusion as to obviousness or nonobviousness by the teachings of the references themselves, not <u>pulled</u> to the claimed combination after a careful study of Applicants' disclosure.

The Examiner must perform like the hypothetical person animated to in *In re Winslow*, 365 F.2d 1017, 151 USPQ 48 (CCPA 1966) and *In re Antle*, 444 F.2d 1168, 170 USPQ 285 (CCPA 1971), who, surrounded by all prior art references on the walls, is able recognize a problem in the prior art, and the solution thereto as presented in prior art itself. In this case, the Examiner has failed to note how the prior art identifies any problem, let alone how the references would naturally lead

one to Applicants' claimed combinations.

Conclusion

For the foregoing reasons, applicants' attorney respectfully submits that claims 1, 3, 6-10 and 13-21 are in condition for allowance.

This Amendment is believed to be fully responsive to the Office Action of March 24, 2006; is believed to squarely address each and every ground for objection or rejection raised by the Examiner; and is further believed to materially advance the prosecution of this application toward immediate allowance.

Formal allowance of claims 1, 3, 6-10 and 13-21 is, therefore, courteously solicited.

Respectfully submitted,

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June 6, 2006

CERTIFICATE OF MAILING

I certify that this correspondence is being deposited with the United States Postal Service as first class mail, postage prepaid, in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, on June 6, 2006.

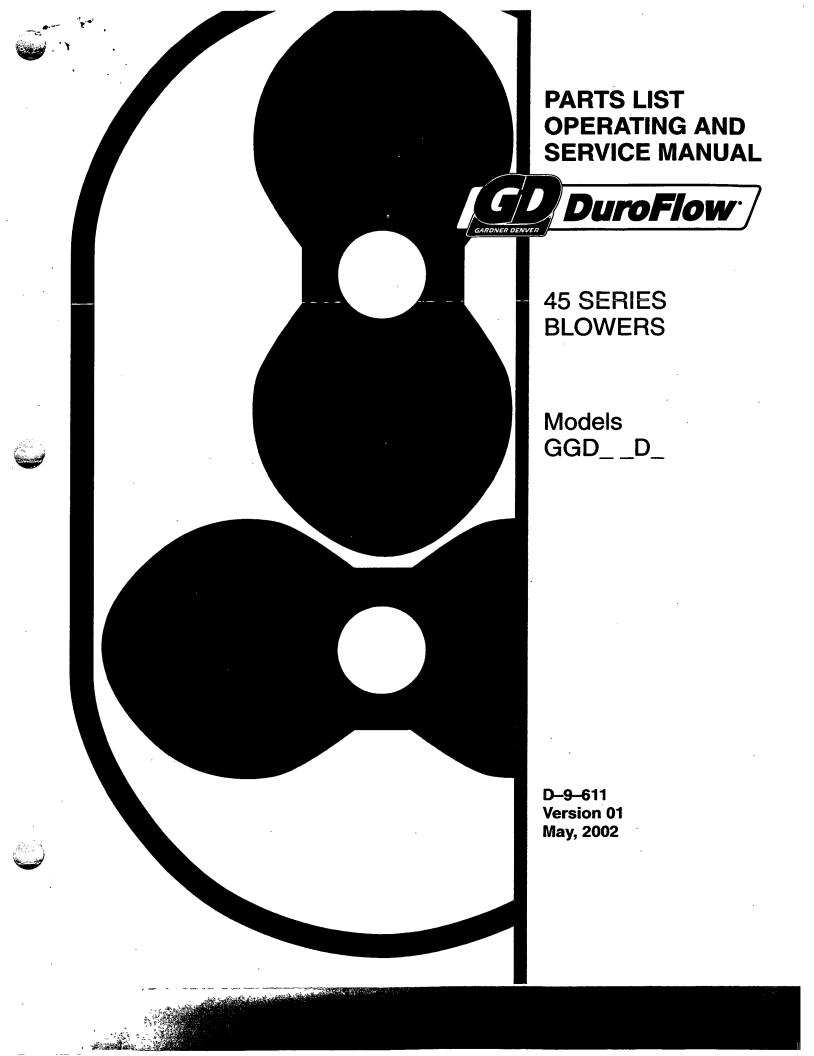
PHILLIPS LYTLE LLP

Peter K. Sommer, Esq.

Reg. No. 26,587

Signed: June 6, 2006

Doc#1566808.1



OPERATION

Future operating problems can be avoided if proper precautions are observed when the equipment is first put into service.

Before starting under power, the blower should be turned over by hand to make certain there is no binding, or internal contact.

LIMITATIONS

Each size blower has limits on pressure differential, running speed, and discharge temperature which must not be exceeded. These limits are shown in FIGURE 4–1, page 13.

M WARNING

Operating beyond the specified operating limitations will result in damage to the unit.

To accurately determine actual blower operating conditions, it is important that all pressure and temperature recordings are made directly at the ports of the blower where these conditions are at their maximum.

Relief valves MUST be used to protect the blower against excessive pressure or vacuum conditions. These valves should be tested at initial start up to be sure they are adjusted to relieve at 2 psi above the maximum allowable pressure or at 2" HG below the maximum allowable vacuum for the blower. Periodic testing of relief valves is suggested to assure that they are functioning.

NOTICE

Relief valves should be placed as close as possible to the blower inlet on vacuum systems or discharge on pressure systems.

Check valves must be installed on the discharge side of the blower on a pressure system and on the inlet side of the blower on a vacuum system to eliminate product ingestion resulting from autorotation and blow back during equipment shutdown.

SAFETY PRECAUTIONS

- Do not operate the blower with an open inlet or discharge port.
- Do not exceed specified vacuum or pressure limitations.
- Do not operate above or below recommended blower speed range.
- The blower is not to be used where non-sparking equipment is specified. Contact your DuroFlow Distributor for non-sparking requirements.
- 5. Do not operate the blower without belt guard or coupling shield properly installed.
- Do not exceed the manufacturer's specified rim speed limit for sheaves or couplings.
- The blower and blower discharge piping may be extremely hot and can cause skin burns on contact.
- 8. Do not exceed the manufacturer's certification levels for vacuum or pressure vessels.



MAXIMUM OPERATING LIMITATIONS

Size	RPM	Differential Pressure PSI	Dry * Vacuum In HG	Discharge Temperature °F
4504	4000	15	15	350 177 0
4506	4000	15	15	350
4509	4000	15	15	350
4512	4000	15	15	350
4518	4000		16	325 163 6

DO NOT EXCEED THESE LIMITS

* Increased vacuum levels are attainable with water injection. Contact your DuroFlow Distributor.

NOTICE

Blower speed, line losses, elevation, and increased inlet temperatures affect actual blower performance. Care must be taken to consider these factors when designing your system so that blower limitations are not exceeded.

FIGURE 4-1 - MAXIMUM OPERATING LIMITATIONS

78 USPQ2d

ment agreement. If it were to reaffirm its torney fees and costs determination after it has award of costs and fees, an appeal would, of land Steele Co. v. LTV Steel Co., 364 F.3d 1318, 1320-21 [70 USPQ2d 1472] (Fed. Cir. Atrana was a prevailing party. 35 U.S.C. §.285 (2000). Atrana cannot be a prevailing party if the case was resolved by settlement (not incorporated by judicial decree) prior to any relief on the merits. See Akers v. Nicholson, 409 F.3d 1356, 1359 (Fed. Cir. 2005); In-2004). For this reason, we vacate this award so that the district court can reconsider its ataward of fees and costs was not proper unless determined the enforceability of the settle course, be available to this court.

CONCLUSION

For the foregoing reasons, the decision below is affirmed in part, reversed in part, vacated in part, and remanded for further proceedings.

AFFIRMED-IN-PART, REVERSED-IN-PART, VACATED-IN-PART, and REMANDED-IN-

COSTS

No costs.

In re Kahn

U.S. Court of Appeals Federal Circuit

Decided March 22, 2006 No. 04-1616

PATENTS

[1] Practice and procedure in Patent and Trademark Office - Board of Patent Appeals and Interferences - In general (§ 110.1101)

Patentability/Validity — Obviousness — Combining references (§ 115.0905)

Patentability/Validity — Obviousness — Evidence of (§ 115.0906)

tivation to combine prior art references is not specific problem solved by invention at issue, but general problem that confronted inventor Problem to be examined in considering mo-

thus, problem facing inventor, would have been led to make claimed combination, and from this it "motivation-suggestion-teaching" test asks whether person of ordinary skill in art, possessed with understandings and knowledge resures, teachings, and suggestions of prior art, and level of skill in art, support legal concluflected in prior art and motivated by general may be determined whether overall disclodisclose, made; not merely what references sion of obviousness. invention before

- Combining references (§ 115.0905) 2] Patentability/Validity

dimensional sound, in view of prior patent's sight, to locate point in space, and to create express teaching that two-dimensional sound to achieve invention of application claiming lates to augmentation of vision of those who on screen at which user is looking and seeks o provide visually-impaired user better conrol over word localization, would have reason to solve that problem by adding twocan be used to "substitute" for lost sense of "rudimentary reading device" for visually imthat person of ordinary skill in art would have art patent, which claims acoustical imaging ies diminished, that it is useful in teaching virtual sound source as representing a point in space," and that it may be used as "rudimenary reading device," and since skilled artisan, able of reading word aloud by selecting word Substantial evidence supports conclusion seen motivated to combine teachings of prior system for use by visually impaired individuals, with teachings of two primary references 'reading machine" for use by blind persons, since prior patent teaches that its invention rehave lost vision or have had their visual faculwho knows of "learning machine" that is ca such persons "to apprehend the position of vaired persons.

Obviousness skill in art — Person of ordinary [3] Patentability/Validity (§ 115.0902)

Patentability/Validity — Obviousness Combining references (§ 115.0905) Board of Patent Appeals and Interferences sight; in making prima facie case of obviousness, since motivation to combine prior art did not overstate knowledge of person of ordinary skill in art, or employ improper hind-

references to achieve invention claimed in application was articulated and placed on record.

Obviousness - Combining references (§ 115.0905) [4] Patentability/Validity —

achieve invention claimed in application is ary reference to primary reference resulted in reference is not limited to specific invention vated to combine prior art references to without merit, since, even if applying seconddevice that would be less effective for primary reference's intended purpose, teaching of that disclosed therein, since applicant may have with primary reference, as there is nothing in Applicant's contention that person of ordinary skill in art would not have been motienvisioned something different from skilled artisan in considering secondary reference, but erence does not teach away from combination secondary reference that would discourage person of skill in art from using device taught artisan need not be motivated to combine secondary reference for same reason contemplated by applicant, and since secondary refin primary reference in claimed combination, or that would lead skilled artisan in direction divergent from path taken by applicant.

Obviousness - Long felt need (§ 115.0909) [5] Patentability/Validity. —

Appellate court will not take judicial notice of long-felt need for device claimed in patent application, which is intended to help blind persons read, since finding either way on question of long-felt but unresolved need can reasonably be questioned, and long-felt need hus is not type of undisputed fact susceptible of judicial notice, and since precedent requires hat applicant submit actual evidence of longelt need, as opposed to argument, in that mere passage of time without claimed invenion is not evidence of nonobviousness. Appeal from the U.S. Patent and Trademark Office, Board of Patent Appeals and InterferApplication of Leonard R. Kahn for patent ing rejection of claims in application for obvion "reading machine" for use by blind persons. Applicant appeals from decision upholdousness under 35 U.S.C. § 103. Affirmed.

Leonard R. Kahn, New York, N.Y., pro se.

John M. Whealan, solicitor; Linda Moncys icitors, and Mary L. Kelly, U.S. Patent and Isacson and Raymond T. Chen, associate so-Frademark Office, Arlington, Va., for Director, U.S. Patent and Trademark Office.

Before Michel, chief judge, and Linn and Prost, circuit judges.

Linn, J.

Leonard R. Kahn ("Kahn") appeals from patentable as obvious under 35 U.S.C. § 103.1 3ecause the factual findings underlying the the final decision of the Board of Patent Apthat claims 1-20 in patent application number 08/773,282 ("the '282 application") are un-Board's conclusion are supported by substancommit legal error in concluding that the peals and Interferences ("Board") concluding ial evidence, and because the Board did not claims would have been obvious, we affirm.

BACKGROUND

I. A. The Invention

chines that employed memory and display While a user can control these devices by hand to repeat words and to read at various involves a "reading machine" that may be used by the blind. Prior to the application, macomponents by which material could be pens and speech synthesizers were known in the art. speeds, such control is cumbersome, which makes it difficult for a blind user to study complex publications. Kahn addressed this The '282 application, filed on December 24, 1996 as a continuation-in-part of a series of problem and claims invention in a device that tion such that it can read out loud the word continuing applications dating back to 1989, is operated by eye control and sound localiza-"read" using hand-held optical looked at" by the user.

Kahn treats claims 1-20 as a group with claim 1 being representative: 1. A reading machine suitable for use by totally blind individuals for reading the complete text, or a selected portion thereof, of a document stored in storage means, at the option of the user, comprising: ¹ The Board also affirmed its own rejection of claims 21 and 22 as being non-enabled under 35 U.S.C. § 112, I 1; however, in his opening brief on appeal Kahn withdrew those claims, leaving only claims 1-20 before us.

(a) means of storing at least a portion of 78 USPQ2d

the text of the document to be read,

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means for retrieving a selected portion of said stored text made available for immediate "reading," **e**

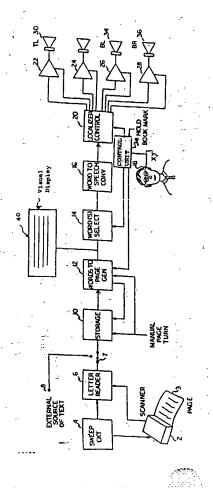
said means for producing an acoustical display of the selected portion of stored text, in a page-like format, <u>છ</u>

means for determining the location on the acoustical display towards which the user is "looking," and ਉ

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to appear on the acoustical display at means for generating speech sounds verbalizing the word that is formatted the location the user is "looking" towards. (e) ,

A preferred embodiment of the '282 patent is illustrated below in Figure 1.



In operation,

FIG.1

ions would be selected by the user looking ion so that the artificial sound image can be screen or page allowing the user to hear the at a specific location on the artificial screen [t]he information being "read" . . . is fed hrough intermediate storage means to speech synthesizer means for converting he written information to electrical waves representing speech sounds. These electric waves are fed to ... a four speaker array wherein the speakers are located in a fashplaced at various points on the artificial words at the desired locations. These locaor page.

The user would then move his or her eyes to "look" where the next word would be expected to appear, i.e., directly to the right of the spoken word. This would then cause the next word to be "spoken" and the sound image would appear slightly to the

right. This motion is achieved by energizing the four speaker array with different levels of audio power. . . .

tion on the page or causing the page to be he can direct his attention to the material to be reread by "looking" at the portion of the would have the option of rereading a sec-When the user completes the "reading" of the last word on the page, ... the reader "turned." If the user wishes to reread . . ., page where he remembers hearing the material.

the right hand edge of the "page". The first word on the new page would be heard when the reader directed his or her attention to where the first word on the new page would tinue reading the material he can turn the page by looking along the bottom line past On the other hand, if he wishes to conthe upper left hand corner of the page be expected.



The second second

'282 application at 11-13

According to the specification, the device can employ a conventional scanner to input vice; and a page generator to take data from the storage device and format it for a visual data; a conventional character recognition dedisplay and for a word selector, the latter of tects where a user is "looking" and a word is vice to translate and send data to a storage dewhich can send the data to a conventional speech synthesizer. After an optical sensor de-"selected" for vocalization, the synthesizer Loud speakers are arranged at the corners of the "page" to allow the user to confirm localfeeds an audio signal to a localizer control. ization of sound. The specification further indicates that

[t]here are a number of devices available Anderson et. al. 4,579,533 ... and Stanton son's [sic] patent discusses feed-back which may be visual, auditory or tactile to verify for sensing where an individual is looking. 4,322,744 More specifically, Ander-For example, Garwin et. al. 4,595,990 decisions by eye control equipment. However, such inventions are not suitusing their eyes to direct which part of the artificial page should be read to produce a able for totally blind individuals who are not verifying where they are looking but are sound image. This makes essential a two dimensional stereo sound stage which the blind person solely depends upon.

282 application at 16.

B. The Prior Art

The Board's rejection was based on Garwin al., U.S. Patent No. 4,595,990 (issued June 17, 1986) ("Garwin"), in view of Anderson et "Stanton"). The Board alternatively used al., U.S. Patent No. 4,406,626 (issued Sept. 27, 1983) ("Anderson '626"), Anderson et al. U.S. Patent No. 4,579,533 (issued April 1 1986) ("Anderson '533"), and Stanton, U.S. Patent No. 4,322,744 (issued March 30, 1982) Anderson '626 or '533 as primary references.

tion of a visual display at which the user is Garwin discloses an eye-controlled interactive information processor that senses the pordifferent information is displayed in discrete user informs the processor of the displayed looking. The processor is connected to the display, which, in turn, can be partitioned so that areas. By gazing in different directions, the

flected light eye-tracking device to determine The preferred embodiment employs a re-4, 1. 62. The eye-interactive control generally uses a technique where the user is presented ing, such as "words or phrases" displayed on screen. Id., col. 9, Il. 62-67. "Visual, auditory or tactile" feedback is then given to the user of a page of text from a ... table of contents," id, col. 3, ll. 42-44, or "[other] presentation with a number of targets having some mean-Id., col. 2, Il. 10-11; col. 11, Il. 59-64. The user then can verify or cancel the selection. 50-53. It can be used for "request[ing] display item that is selected. Garwin, col. 2, Il. 60-68 where the user is looking. Id., col. 3, l. 66-col. to indicate that a selection has been received. ld., col. 10, ll. 1-6. Garwin states that "it will the benefits of the invention will be achieved by many types of apparatus." Id., col. 2, 11. be apparent to one skilled in the art that ... of textual material," id., col. 10, II. 31-33.

"electronic teaching aid" which enables a user viewing text on a display to designate col. 2, II. 11-17. The components include: a selector switch, which when in the "text" po-Anderson '626 discloses an interactive any words or portion of text for immediate audible vocalization. Anderson '626, col. 1, 1. 8; sition, causes data to be transmitted to a monitor and displayed in legible form, id., col. 3, II. 27-31; an advance button, which when depressed allows the user to select and retrieve the next page of text from memory, id., col. 3, ll. 31-41; a memory, which can store each 1. 66-col. 4, 1. 6; and a word designator light ben, which the user can place on a word to hear the word vocalized through the speaker, id., col. 3, Il. 54-68; col. 10, Il. 51-58. Anderdiscloses an improved microprocessor-based version of Anderson word of the text coded for speech, id., col. 3, 626. Anderson '533, col. 1, Il. 19-24, 41-56. 533 son

Stanton discloses an acoustical imaging system for use by visually impaired individuals that uses horizontal and vertical directional ronment. Stanton states that a user can locate resenting a point in space" such that different sound to represent visual aspects of an envi-'the position of a virtual sound source as repbodiment features four loud speakers or transducers mounted at the corners of a vertical display panel. Id., col. 2, Il. 54-55. When the signals may represent different directions. Stanton, col. 1; il. 58-61. The preferred emuser moves the cursor, the sound emanating

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from the speakers is phase shifted to produce a virtual sound seeming to come from a particular location related to the position of the cursor. Id., col. 1, 1. 66-col. 2, 1. 2; col. 2, 1l. 55-63. In another embodiment, a quadraphonic headset is used in place of the trans-, ducers to achieve the effect of producing a virtual sound identifying a position. Id., col. 4, Il. 26-35. Stanton states that the device may be used as a "rudimentary reading device." Id.,

C. The Board Decisions

24, 2003) ("2003 decision"); and Ex Parte doned continuing applications dating back to application number 07/338,597, which was filed in 1989. While claims 21 and 22 of the occasions, which led to the creation of a subwhich include Ex Parte Kahn, No. 2004-1091 (B.P.A.I. June 30, 2004) ("2004 decision"); Ex Parte Kahn, No. 2000-1130 (B.P.A.I. Feb. Kahn, No. 94-2233 (B.P.A.I. Sept. 21, 1995) claims as a continuation-in-part of application was a continuation-in-part of a series of abanstantial Board history. As a result, the final decision with respect to the obviousness rejection of claims 1-20 spans three decisions, Kahn filed the '282 application with 22 number 07/645,102 ("the '102 application"), which was filed in 1991. The '102 application 282 application are not at issue in this appeal, the Board addressed those claims on several ("1995 decision").

phasis in original). The Board found that "to and "teach the advantages of text display with audio reproduction," concluding that whatever extent Garwin is not concerned with § 103. The Board found that Garwin taught play screen a user is 'looking' . . . and giving and that "[w]hile nothing specific is said as to propriate in view of such auditory feedback confirmation clearly suggested by Anderson aminer's anticipation rejection, the Board sua sponte rejected the relevant claims under "the concepts of determining where on a disacoustically reproducing a word displayed at that location, common sense indicate[s] that such an auditory feedback response is ap-'533 or '626." 1995 decision, slip op. at 5 (emtext per se, [the Anderson] references are" In its 1995 decision, after reversing the exeither visual or auditory feedback to the user'

the artisan would have found it to have display of text passages and selection of been obvious to have modified Garwin for

ences to use the eye control of Garwin so Anderson '626 or '533 ... [or] to have modified either of these Anderson referthat the user's hands would have been free as feedback confirmation, all as taught by works therefrom with vocalization thereof for other tasks.

advantageous acoustic imaging to either of the above-noted modified devices of Garwin or the Anderson patents which would have word ton "teaches the benefit of acoustic imaging in reading systems" and that "[i]t would have, thus, been further obvious to the artisan to add positions acoustically and visually indicated." 'd., slip op. at 5-6. The Board found that Stan-*Id.*, slip op. at 6.

information," "means for displaying stored written text," and "means for determining which word of the displayed text the user is ecting Kahn's, argument that hindsight drove erated that the rationale of the 1995 decision was correct and explained that motivation "clearly is based upon a prospective look at the state of the art." 2003 decision, slip op. at ooking towards"; that Anderson '626 teaches the combination of references, the Board reitmemory which stores at least a portion of the means for subsequently retrieving the sensed "means for generating speech sounds verbalizing the looked at word"; and that Stanton teaches "means for verbalizing each word the sional stereo." Examiner's Answer at 5-6. Recorporated the findings and rationale from swer filed on April 24, 2000. 2003 decision, slip op. at 3-4. In the Answer, the Examiner had explained that Garwin teaches "a buffer information derived from sensing means and user's eyes are directed towards in two dimenboth its 1995 decision and the Examiner's An-In its 2003 decision, the Board expressly in-

entability, noting that "the manner in which a does not differentiate the claimed apparatus [from] a prior art apparatus satisfying the claimed structural limitations." Id. at 5-6. Secplaining that "[t]he law . . . does not require claimed apparatus is intended to be employed ond, the Board rejected the argument that because "the purposes of the [prior art] references ... are different from the [invention's] purpose," the invention is non-obvious, exments. First, the Board rejected the argument that the invention's intended use supports patthat references be combined for reasons con-The Board addressed several other argu-

emplated by an inventor" and that "prior art need not suggest the same problem set forth ary reference be capable of incorporation into the invention be suggested completely by one reference, Id. at 7. Finally, the Board rejected a "long-felt need" argument, explaining that Khan had not presented any objective evidence of a long-standing problem or longby appellant." Id. at 6-7. Third, the Board reected the arguments that features of a secondthe structure of a primary reference and that standing need in the art. Id. at 11-12.

In its 2004 decision, the Board entered a final rejection of claims 1-20 based on its 2003 decision. Kahn timely appealed to this court. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(4)(A).

II. DISCUSSION

A. The Parties' Arguments

tice" that his reading machine addresses a stantial evidence: Citing In re-Lee, 277 F.3d 1338 [61 USPQ2d 1430] (Fed. Cir. 2002), and 453] (Fed. Cir. 1998), Khan argues that the 30ard overstated the knowledge of the skilled artisan and employed improper hindsight. Specifically, Khan asserts that a skilled artisan would not have sought to augment Garwin be more expensive and less reliable for the purpose intended by Garwin. He contends that ust because Stanton teaches use of sound to confirm a visual perception of a shape like a etter-which provides a "rudimentary" readng capability-does not mean that the reference teaches how to enable a blind user to "read" and "reread" entire words and phrases quickly. Khan further contends that Stanton teaches away from a system that employs iris eye direction sensing because Stanton requires the user to hold his head steady, because eyes are not involved in its localization procedure, gues that the court should take "judicial no-"long-felt, but unresolved need," and that this in re Rouffet, 149 F.3d 1350 [47 USPQ2d with sound because the resulting device would and because the combined device, would be expensive and inoperable. Second, Khan arvation to combine was unsupported by subconsideration is sufficient to rebut a prima fa-Khan advances two main arguments. First Khan asserts that the Board's finding of moticie case of obviousness.

The Patent and Trademark Office ("PTO") counters that Lee and Rouffer are distinguish-

no actual evidence, and that Kahn's argument alone is insufficient to rebut a prima facie able because here the Board identified motivations to combine the references based on specific statements in the references and on the elt need, the PTO argues that Kahn proffered nature of the problem to be solved. As to long-

B. Standard of Review

[1485USPQ 459] (1966). The ultimate deter-Cir. 1999). We review the Board's ultimate However, we review the Board's underlying In re Gartside, 203 F.3d 1305, 1316 [53 A claimed invention is unpatentable if the differences between it and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the pertinent art. 35 U.S.C. § 103(a) (2000); Graham v. John Deere Co., 383 U.S. 1, 13-14 mination of whether an invention would have been obvious is a legal conclusion based on 75 F.3d 994, 998 [50 USPQ2d 1614] (Fed. factual findings, including a finding of a mounderlying findings of fact. In re Dembiczak, determination of obviousness de novo. Id. iivation to combine, for substantial evidence. USPQ2d 1769] (Fed. Cir. 2000).

Substantial evidence is something less than the weight of the evidence but more than a mere scintilla of evidence. Id. at 1312 (citing son, 305 U.S. at 229-30. In reviewing the record, we must take into account evidence determinations. Gartside, 203 F.3d at 1312 (citing Universal Camera Corp. v. NLRB, 340 U.S. 474, 487-88 (1951)). We note that the the Board's findings from being supported by 229-30 (1938)). It means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion. Consol. Edipossibility of drawing two inconsistent conable mind might accept the evidence as adequate to support the factual conclusions drawn by the Board, then we must uphold the Consol. Edison Co. v. NLRB, 305 U.S. 197, that both justifies and detracts from the factual clusions from the evidence does not prevent substantial evidence. Id. Indeed, if a reason-Board's determination. Id.

C. Analysis

In assessing whether subject matter would have been non-obvious under § 103, the Board follows the guidance of the Supreme

between the prior art and the claims at issue," and resolves "the level of ordinary this background, the Board determines whether the subject matter would have been obvious to a person of ordinary skill in the art at the time of the asserted invention. Graham, 383 U.S. at 17. In making this determination, the Board can assess evidence related to secondary, indicia of non-obviousness like "commercial success, long felt but unresolved needs, failure of others, etc." Id., 383 at 17-18; accord Rouffett, 149 F.3d at 1355. We Board determines " 'the scope and content of the prior art," ascertains "the differences (quoting Graham, 383 U.S. at 17). Against Court in Graham v. John Deere Co. The skill in the pertinent art." "Dann v. Johnston, 425 U.S. 219, 226 [189 USPQ 257] (1976) have explained that

ficient evidence of prima facie obviousness or by rebutting the prima facie case with [t]o reject claims in an application under rebutted prima facie case of obviousness On appeal to the Board, an applicant evidence of secondary indicia of nonobvisection 103, an examiner must show an uncan overcome a rejection by showing insuf-

Rouffett, 149 F.3d at 1355.

practice, this requires that the Board "explain ences and to combine them to render the This entails consideration of both the "scope ever, mere identification in the prior art of entability of the combined subject matter as a a prima facie case of obviousness based on a combination of elements disclosed in the prior art, the Board must articulate the basis on which it concludes that it would have been obvious to make the claimed invention. Id. In the reasons one of ordinary skill in the art would have been motivated to select the referand content of the prior art" and "level of ordinary skill in the pertinent art" aspects of the Most inventions arise from a combination of old elements and each element may often be found in the prior art. Id. at 1357. Howwhole. Id. at 1355, 1357. Rather, to establish claimed invention obvious." Id. at 1357-59. each element is insufficient to defeat the pat-Graham test.

a more practical test of patentability.")

would have led the skilled artisan at the time of the invention to the claimed combination as When the Board does not explain the motivation, or the suggestion or teaching, that a whole, we infer that the Board used hind-

Dann, 424 U.S. at 225-26 ("[I]t was only in 1952 that Congress, in the interest of 'uniforthat "legal inferences" resulting from "secondary considerations" might help to overtations omitted)). By requiring the Board to explain the motivation, suggestion, or teaching as part of its prima facie case, the law guards against hindsight in all cases-whether or not the applicant offers evidence on secondary considerations-which advances Congress's goal of creating a more practical, uniform, and definite test for patentability. See mity and definiteness,' articulated the require-(1952))); Graham, 383 U.S. at 17 ("The § 103 test], when followed realistically, will permit ping into use of hindsight, and to resist the temptation to read into the prior art the teachings of the invention in issue." (internal quoment in a statute." (quoting S. Rep. No. 1979, Rich, Laying the Ghost of the Invention Requirement, 1 APLA Q.J. 26-45 (1972), resoning, the time is specified to be the time when the invention was made.") (emphasis in original). The Supreme Court recognized the hindsight problem in Graham and proposed come it. 383 U.S. at 36 ("[Secondary considerations] may also serve to guard against slip-See 35 U.S.C. § 103 (stating that obviousness must be assessed "at the time the invention was made"); Dembiczak, 175 F.3d at 998 printed in 14 Fed. Cir. B.J. 163, 170 (2004) "To protect the inventor from hindsight rea-("[]]t is this phrase that guards against entry into the tempting but forbidden zone of hindsight." (internal quotations omitted)); Giles S. sight to conclude that the invention was obviteaching" requirement protects against the entry of hindsight into the obviousness analysis, a problem which § 103 was meant to confront. at 6 (1952); H.R. Rep. No. 1923, at ous. Id. at 1358. The "motivation-suggestion-

teaching test, a related test-the "analogous Although our predecessor court was the art" test-has long been part of the primary Graham analysis articulated by the Supreme Court. See Dann, 425 U.S. at 227-29; Graham, 383 U.S. at 35.2 The analogous-art test first to articulate the motivation-suggestion-



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[&]quot;pertinent prior art," arguing that while the invention involved a container having a "pump sprayer," the reference related to containers having "pouring spouts." 2 In Graham, Cook Chemical challenged the court's reliance on a reference that it believed was not in a 383 U.S. at 35. In reaching the conclusion that the

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lem with which the inventor was concerned in 24 USPQ2d 1443] (Fed. Cir. 1992). Refernent to the problem based on the judgment of would have been motivated to combine referre Clay, 966 F.2d 656, 659-60 [23 USPQ2d 1058] (Fed. Cir. 1992).3 regular the Board show that a reference is either in the field of the applicant's endeavor or is reasonably pertinent to the proborder to rely on that reference as a basis for rejection. In re Oetiker, 977 F.2d 1443, 1447 ences are selected as being reasonably perti-("[I]t is necessary to consider 'the reality of the circumstances, -in other words, common sense—in deciding in which fields a person of ordinary skill would reasonably be expected to look for a solution to the problem facing the inventor." (quoting In re Wood, 599 F.2d 1032, 1036 [202 USPQ 171] (C.C.P.A. 1979))). We have explained that this test begins the inquiry into whether a skilled artisan ences by defining the prior art relevant for the obviousness determination, and that it is meant to defend against hindsight. See id.; In person having ordinary skill in the art. Id.

Ly obviousness case because "[w]hile the Dirk's invention is not designed specifically for application to the bank.

The gindustry many of its characteristics and capabilities the similar to those of respondent's system." Id. at 229. solved was a mechanical closure problem and that a similar system used in a non-banking context. Id. at Of ordinary skill in the art would be aware of this reference and the Court could rely upon it in making its relied upon in making its obviousness case involved a 228. Citing Graham, the Court explained that a person claimed subject matter was obvious, the Court rejected Cook's argument, explaining that the problem to be nent reference. 1d. Similarly, in Dann, the invention involved the use of automatic data processing equipment 425 U.S. at 227-28. The Dirk reference that the Court closure device in such a closely related art was a pertianalyze transactions within a single bank account

[i]f a reference disclosure has the same purpose as the claimed invention, the reference relates to the same problem, and that fact supports use of that reference in an obviousness rejection. An inventor erence when making his invention. If it is directed may well have been motivated to consider the ref-

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present a prima facie case of obviousness." 977 F.2d at 1447. in a manner that reconstructs the applicant's invention only with the benefit of hindsight, is insufficient to

motivation-suggestion-teaching test picks up where the analogous art test leaves off and informs the Graham analysis. To reach a non-hindsight driven conclusion as to whether a person having ordinary skill in the art at the time of the invention would have viewed the subject matter as a whole to have been obvious in view of multiple references, the Board must provide some rationale, articulation, or reasoned basis to explain why the with governing obviousness law, see § 103(a); Graham, 383 U.S. at 35; Dann, 425 U.S. at 227-29, and helps ensure predictable patentconclusion of obviousness is correct. The requirement of such an explanation is consistent ability determinations.

ences. . . . The test for an implicit showing A suggestion, teaching, or motivation to combine the relevant prior art teachings does rather than expressly stated in the referis what the combined teachings, knowledge the teaching, motivation, or suggestion may of one of ordinary skill in the art, and the not have to be found explicitly in the prior art, be implicit from the prior art as a whole,

nature of the problem to be solved as a

whole would have suggested to those of or-

dinary skill in the art.

ousness grounds cannot be sustained by mere USPQ2d 1313] (Fed. Cir. 2000) (internal citare Kotzab, 217 F.3d 1365, 1370 [55 tions omitted). However, rejections on obviunderpinning to support the legal conclusion conclusory statements; instead, there must be some articulated reasoning with some rational of obviousness. See Lee, 277 F.3d at 1343-46; Rouffett, 149 F.3d at 1355-59. This requirement is as much rooted in the Administrative Procedure Act, which ensures due process and non-arbitrary decisionmaking, as it is in § 103. See id. at 1344-45.

the specific problem solved by the invention but the general problem that confronted the famor Danek, Inc., 424 F.3d 1293, 1323 [76 [1] In considering motivation in the obviousness analysis, the problem examined is not e.g., Cross Med. Prods., Inc. v. Medironic So-USPQ2d 1662] (Fed. Cir. 2005) ("One of ordinary skill in the art need not see the identical problem addressed in a prior art reference to be motivated to apply its teachings."); inventor before the invention was made. See, F.3d 1361, 1372 [56 USPQ2d 1065] (Fed. Cir. Ecolochem, Inc. v. S. Cal: Edison Co.,

2000) ("Although the suggestion to combine references may flow from the nature of the

2005) (characterizing the relevant inquiry as knowledge of the claimed invention,[] have art and combined them in the manner claimed"); see also Graham, 383 U.S. at 35 characterizing the problem as involving mechanical closures rather than in terms more specific to the patent in the context of determining the pertinent prior art). Therefore, the "motivation-suggestion-teaching" test asks not merely what the references disclose, but possessed with the understandings and knowledge reflected in the prior art, and motivated by the general problem facing the inventor, would have been led to make the combination recited in the claims. See Cross Med. Prods., teachings, and suggestions of the prior art, and the level of skill in the art—i.e., the understandings and knowledge of persons having ordinary skill in the art at the time of the invention-support the legal conclusion of obviousness. See Princeton Biochemicals, 411 F.3d at 1338 (pointing to evidence supplying detailed analysis of the prior art and the reasons one of ordinary skill would have possessed the knowledge and motivation to com-"[would] an artisan of ordinary skill in the art at the time of the invention, confronted by the same problems as the inventor and with no selected the various elements from the prior whether a person of ordinary skill in the art, 424 F.3d at 1321-24. From this it may be determined whether the overall disclosures, 992) ("[T]he law does not require that the templated by the inventor."); Princeton Bio-F.3d 1332, 1337 [75 USPQ2d 1051] (Fed. Cir. Monarch Knitting Mach. Corp. v. Sulzer Morat GmbH, 139 F.3d 877, 881 [45 USPQ2d 1977] (Fed. Cir. 1998))); In re Beattie, 974 F.2d 1309, 1312 [24 USPQ2d 1040] (Fed. Cir. problem, '[d]efining the problem in terms of its solution reveals improper hindsight in the selection of the prior art relevant to obviousness.' " (internal citation omitted) (quoting references be combined for the reasons conchemicals, Inc. v. Beckman Coulter, Inc., 411 bine).

626, or Stanton, or that each reference lies in with the Board's finding that a person having each element of his claimed invention can be found in either Garwin, Anderson '533 and the pertinent art. Nor does Khan take issue ordinary skill in the art would have been mo-In this case, Khan does not dispute that

that ... the benefits of the invention will be may be "virtually [any device] susceptible of control by a computer, including ... [those tivated to modify Anderson '533 or '626 in col. 2, II. 50-53, col. 10, Il. 31-35 (stating that achieved by many types of apparatus" which "it will be apparent to one skilled in the art view of Garwin, or vice versa. See Garwin, geared] to presentation of textual material").

of acoustic imaging in reading systems." The Garwin combination and recognized that a aced by Kahn would have been led by the teaching of Stanton "to add advantageous acoustic imaging" to the Anderson/Garwin of the evidence supporting the Board's prima ply the teachings of Stanton to achieve the claimed invention. In the 1995 decision, the Board carefully examined the Anderson/ skilled artisan confronted with the problem Rather, Khan's challenge to the sufficiency combination so that it would have "word po-Board found that Stanton "teaches the benefit facie case is directed at the motivation to apsitions acoustically and visually indicated."

two-dimensional sound in view of Stanton's lem addressed in a prior art reference to be motivated to apply its teachings"). Because ates to augmentation of vision of those who vice," id., Il. 61-62. A skilled artisan, who of reading a word aloud by selecting the word ter control over word localization,4 would express teaching that two-dimensional sound of sight, to locate a point in space, and to create a "rudimentary reading device" for the vi-F.3d at 1323 (holding that "[o]ne of ordinary ies diminished," col. 1, 11: 6-8, that it is "use-'ul in teaching a deprivee to apprehend the position of a virtual sound source as representing a point in space," id., 11. 58-59, and that it knows of a "learning machine" that is capable on the screen at which the user is looking and have reason to solve that problem by adding can be used to "substitute" for the lost sense sually impaired. See Cross Med. Prods., 424 skill in the art need not see the identical prob-[2] Stanton teaches that "[its] invention remay be used as a "rudimentary reading deseeks to provide a visually-impaired user bethave lost vision or have had their visual facul-

record to suggest this to be the case, unlike the facts in 4 Kahn does not argue that one of ordinary skill in the art at the time of the invention would be unaware of the nature of this problem, and there is nothing in the the decision of our predecessor court in In re Spon-noble, 405 F.2d 578 [160 USPQ 237] (C.C.P.A. 1969).



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Anderson/Garwin combination, Although, a scintilla" of evidence present from which a reasonable mind could find a motivation to the Board need only establish motivation to combine the teachings of Stanton to the reasonable person might reach the opposite conclusion, there is far more than a "mere combine by a preponderance of the evidence Cir. 2002), we conclude that substantial evidence supports the finding of a motivation to to make its prima facie case, see In re Glaug, 283 F.3d 1335, 1338 [62 USPQ2d 1151] (Fed combine.

identified the desire to free up the hands of the applicability of its optical controls to the reading systems" and properly related those Board overstated the knowledge of the person In this case, motivation to combine was articulated and placed on the record. As to the ton, the Board identified express teachings in Stanton of "the benefit of acoustic imaging in teachings to the Anderson/Garwin combina-[3] We reject Khan's argument that the having ordinary skill in the art or employed improper hindsight in making its prima facie ognized that the knowledge of the skilled artisan could provide the motivation to combine but concluded that no such knowledge was ar-Anderson/Garwin combination, the Board found that Garwin itself evidenced the broad claimed invention. As to the addition of Stancase. In both Lee and Rouffet, the Board recticulated and placed on the record. Lee, 277 F.3d.at 1343-45; Rouffet, 149 F.3d at, 1357-59. Anderson user as the problem confronted and ·.: tion.

[4] We find Khan's remaining arguments unpersuasive. First, even if applying Stanton to Garwin resulted in a device that would be See In re Heck, 699 F.2d. 1331, 1333 [216 ited to what the patentees describe as their own inventions" (internal quotations omitted)). As noted above, 'Garwin states that his ally [any device] susceptible of control by a win, the teaching of the Garwin reference is USPQ 1038] (Fed. Cir. 1983):(explaining that invention is intended to be applied to "virtuless effective for the purpose intended by Gar-"[t]he use of patents as references is not limcomputer, including ... [those geared] to presentation of textual material," Garwin, col. 2, II. 50-53; col. 10, II. 31-35. Second, although not limited to the specific invention disclosed.

Khan may have envisioned something differ-

ent than the skilled artisan when he looked at

ences is provided by the prior art taken as a (C.C.P.A. 1976))). Third, Khan's argument erence. "A reference may be said to teach ence, or would be led in a direction divergent USPQ2d 1130] (Fed. Cir. 1994). Nothing in Stanton can be said to discourage a person naving ordinary skill in the art from using the visual-input control taught in Garwin in the claimed combination or to lead the skilled artisan in a direction divergent from the path mentary reading device, the skilled artisan need not be motivated to combine Stanton for re Beattie, 974 F.2d 1309, 1312 [24 USPQ2d away when a person of ordinary skill, upon reading the reference, would be discouraged from the path that was taken by the applicant." In re Gurley, 27 F.3d 551, 553 [31 he same reason contemplated by Khan. See In 1040] (Fed. Cir. 1992) ("As long as some molivation or suggestion to combine the referwhole, the law does not require that the references be combined for the reasons contemfrom following the path set out in the refer-Stanton because Stanton teaches only a rudiplated by the inventor." (citing In re Kronig, that Stanton itself teaches away from the combination with Garwin lacks support in the ref-539 F.2d 1300, 1304 [190 USPQ 425] taken by, Kahn.

erences that appellant submitted as objective portunity to rebut the Board's prima facie case by offering evidence of objective indicia of sons. First, "long-felt but unresolved need" is not the kind of undisputed fact to which courts cause a finding either way can "reasonably be questioned." See Fed. R. Evid.: 201(b) ("A juto reasonable dispute in that it is either (1) rate and ready determination by resort to sources whose accuracy cannot reasonably be questioned."); In re Fielder, 471 F.2d 640, 642-43 [176 USPQ 300] (C.C.P.A. 1973) (declining to take judicial notice of prior art refevidence of non-obviousness, because appel-. ant did not offer references to the Board and [5] Finally, we note that Kahn had an opvice that will help the blind read. We must decline Khan's invitation for the following reaare accustomed to taking "judicial notice" bedicially noticed fact must be one not subject generally known within the territorial jurisdiction of the trial court or (2) capable of accuthey were not part of the record). Second, our non-obviousness. Khan put on no evidence, of the long-felt/but unresolved need for a debut invites this court to take "judicial notice"

USPO2d 1225] (Fed. Cir. 2004); accord In re precedent requires that the applicant submit actual evidence of long-felt need, as opposed to argument. This is because "[a]bsent a showing of long-felt need or the failure of others, the mere passage of time without the Sports, Inc., 392 F.3d 1317, 1325 [73 Wright, 569 F.2d 1124, 1127 [193 USPQ 332] claimed invention is not evidence of nonobviousness." Iron Grip Barbell Co. v. USA (C.C.P.A. 1977).

III. CONCLUSION

stantial evidence, we conclude that the Board did not err in rejecting claims 1-20 as prima facie obvious. Because Khan did not rebut the Board's prima facie case, the Board's decision Because the factual findings underlying the Board's analysis, including the findings on motivation to combine, are supported by sub-

AFFIRMED.

Arista Records Inc. v. Flea World Inc.

Decided March 31, 2006 District of New Jersey U.S. District Court No. 03-2670 (JBS)

COPYRIGHTS

Rights in copyright; infringement — Right to reproduction — Sound re-[1] Rights in copyright; infringement cordings (§ 213.0507)

Right to distribute copies - In general Rights in copyright; infringement (§ 213.0901)

by various vendors at flea market, and since space and facilities to vendors who have sold rights in sound recordings, since plaintiffs declarations attesting to plaintiffs' ownership lished that vendors at flea market operated by have submitted registration certificates and of allegedly infringed works, and have presented voluminous evidence of infringement defendants have admitted that they provide Plaintiff recording companies have estabdefendants directly infringed plaintiffs' copy-'pirate" and counterfeit CDs and cassettes.

[2] Rights in copyright; infringement.-Right to reproduction - Sound recordings (§ 213.0507)

Right to distribute copies - In general Rights in copyright; infringement (§ 213,0901)

Infringement pleading and practice Contributory; vicarious liability (§ 217.08)

"draw" that increased number of customers shopping at market, and since defendants fendants, since defendants issued rules exsale of certain items, limit vendors' rights to sells goods at market, since flea market thus is controlled environment where defendants ceived direct financial benefit from rental of ings, and vending of such recordings acted as therefore had right and ability to supervise or feit recordings at flea market operated by depressly reserving their right to inspect merchandise offered for sale, and their personnel display certain materials, and control who have comprehensive rules governing what vendors can sell, how goods are displayed, control infringing vendors, and derived finan-Plaintiff recording companies are entitled to summary judgment that corporate defendants copyrights in sound recordings stemming from vendors' sales of "pirate" and counter-"police" market, since defendants prohibit and how vendors behave, since defendants rebooths to vendors selling counterfeit recordare vicariously liable for infringement of cial benefit from those vendors.

Contributory; vicarious liability [3] Infringement pleading and practice (§ 217.08)

cific infringements at time they materially ket proprietors are liable for contributory infringement of copyrights in sound recordings stemming from vendors' sales of "pirate" and counterfeit recordings at flea market need only prove that defendants had constructive knowledge of direct infringement, and thus need not prove that defendants had knowledge of specontributed to direct infringement; "inducement rule," which holds that party who distributes device with object of promoting its use to infringe copyright is liable for resulting acts of infringement by third parties, does not apply in present case, since rule was adopted Plaintiffs alleging that defendant flea mar-